

Practice A

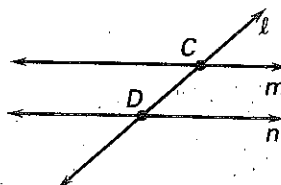
For use with pages 21–27

Complete the statement.

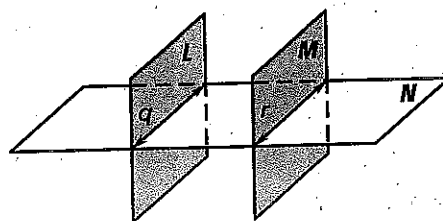
1. If two lines intersect, then their intersection is a ?.
2. If two planes intersect, then their intersection is a ?.

Use the diagram at the right.

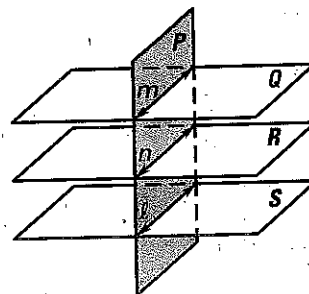
3. Name the intersection of line ℓ and line n .
4. Name the intersection of line ℓ and line m .

**Use the diagram at the right.**

5. Name the intersection of planes L and N .
6. Name the intersection of planes N and M .

**Use the diagram at the right to decide whether the statement is true or false.**

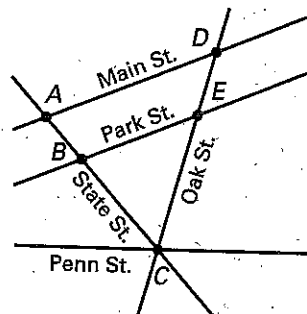
7. Planes Q and R intersect at line n .
8. Planes P and Q intersect at line m .
9. Planes R and S do not appear to intersect.
10. Planes S and P do not appear to intersect.
11. Lines n and ℓ appear to intersect.
12. Planes Q and S intersect at line m .
13. Lines ℓ and m do not appear to intersect.

**Sketch the figure described.**

14. Two lines that lie in a plane and intersect in a point
15. Two planes that intersect in a line
16. Two planes that do not intersect
17. A line that intersects a plane at a point

Use the diagram at the right that shows streets as lines and street intersections as points.

18. Name the intersection of State Street and Park Street.
19. Name the intersection of Oak Street and State Street.
20. Name two streets that don't appear to intersect.
21. Name two streets that appear to intersect somewhere beyond the portion of the map that is shown.



Practice B

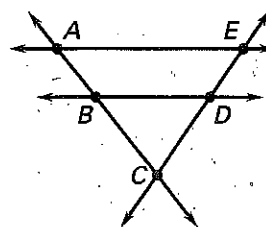
For use with pages 21–27

Decide whether the statement is true or false.

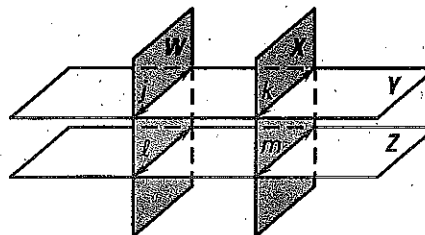
1. If two lines intersect, then their intersection is a plane.
2. If two planes intersect, then their intersection is a point.
3. If two lines intersect, then their intersection is a point.
4. If two planes intersect, then their intersection is a line.

Use the diagram at the right.

5. Name the intersection of \overleftrightarrow{AC} and \overleftrightarrow{CE} .
6. Name the intersection of \overleftrightarrow{AB} and \overleftrightarrow{ED} .
7. Name the intersection of \overleftrightarrow{AE} and \overleftrightarrow{EC} .
8. Name the intersection of \overleftrightarrow{AE} and \overleftrightarrow{BC} .

**Determine the intersection of the given planes, or write no intersection. Use the diagram at the right.**

- | | |
|-------------|-------------|
| 9. W and Y | 10. X and Y |
| 11. Z and X | 12. W and Z |
| 13. W and X | 14. Y and Z |

**In Exercises 15–18, sketch the figure described.**

15. Three lines that lie in a plane and intersect in a point
16. Three planes that do not intersect
17. Two lines in a plane that do not intersect
18. A line that intersects a plane at a point
19. The door shown in the drawing at the right is hung on a frame built into the wall of a house. It swings on hinges, and is held in the closed position by a latch. What is at the intersection of the planes represented by the door and the wall? Is this always true for the normal use of this door? Explain.

